IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Date: December 20, 2007
Robbert C. VAN DER LINDEN	Confirmation No.: 4213
Serial No.: 10/648,499	Group Art Unit: 2165
Filed: August 25, 2003	Examiner: Mark A. RADTKE

For: METHOD AND SYSTEM FOR UTILIZING A CACHE FOR PATH-LEVEL ACCESS CONTROL TO STRUCTURED DOCUMENTS STORED IN A DATABASE

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REPLY BRIEF UNDER 37 C.F.R. § 41.41

Dear Sir or Madam:

Pursuant to 37 C.F.R. § 41.41, Appellant submits this Reply Brief in response to the Examiner's Answer mailed on August 1, 2007.

I. REAL PARTY IN INTEREST

A statement identifying the real party in interest is contained in the Appeal Brief.

II. RELATED APPEALS AND INTERFERENCES

A statement identifying the related appeals and interferences is contained in the Appeal Brief.

III. STATUS OF CLAIMS

A statement identifying the status of the claims is contained in the Appeal Brief.

IV. STATUS OF AMENDMENTS

A statement identifying the status of amendments is contained in the Appeal Brief.

V. SUMMARY OF CLAIMED SUBJECT MATTER

A summary of the claimed subject matter is contained in the Appeal Brief.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A statement identifying the grounds of rejection to be reviewed on appeal is contained in the Appeal Brief.

VII. RESPONSE TO EXAMINER'S ANSWER

Claim 1 recites:

> 1. A method for performing path-level access control evaluation for a structured document, wherein the structured document comprises a plurality of nodes and each of the plurality of nodes is described by a path, the method comprising the steps of:
>
> (a) storing an access control statement in a cache entry for a path associated with a node of the plurality of nodes;
>
> (b) receiving a query, wherein the query comprises a request to access the node;
>
> (c) checking the cache entry for the path associated with the node; and
>
> (d) granting or denying access to the node based on the access control statement in the cache entry for the path associated with the node.

A. Examiner's First Response

In response to Appellant's argument that Damiani ("Design and implementation of an access control processor for XML documents") does not disclose, teach, or suggest "storing an access control statement in a cache entry for a path associated with a node of the plurality of nodes", as recited in claim 1, the Examiner states:

> As indicated in the previous Office Actions, section 3.1 of Damiani is entitled "Identifying authorization objects via path expressions". The section describes the application of access control statements to paths associated with nodes. "Given a path expression l1/l2/.../ln, a condition on label li restricts the application of the path expressions only to those node(s) li for which the condition evaluates to be true." (See page 65, left column, bottom of page) Furthermore, the last few lines of the right column of page 61 describe "authorizations that apply to all documents matching a given path expression". Finally, section 5.3 describes caching transformed documents

> containing access control information. Damiani thus anticipates a cache containing access control information related to a path.

(August 1, 2007 Examiner's Answer, pg. 12).

Appellant respectfully submits that it is irrelevant what Damiani is entitled. The issue is whether Damiani discloses, teaches, or suggests "storing an access control statement in a cache entry for a path associated with a node of the plurality of nodes", as recited in claim 1.

As pointed out by the Examiner, Damiani discusses specifying authorizations for XML documents and elements within XML documents. The Examiner, however, failed to point out that Damiani explicitly teaches that "[a]uthorizations specified for each XML document/DTD (elements within) are stored in an XAS (*XML Access Sheet*) associated with the document/DTD" (pg. 63, section 3 of Damiani). This is also clearly illustrated in FIG. 2 of Damiani.

The fact that Damiani describes caching transformed XML documents is further proof that Damiani was well aware of the caching option, but specifically chose to store the authorizations in an XML Access sheet, rather than in a cache. Hence, contrary to the Examiner's assertions, Damiani does NOT disclose, teach, or suggest "storing an access control statement in a cache entry for a path associated with a node of the plurality of nodes", as recited in claim 1 (emphasis added).

Accordingly, claim 1, and the claims that depend therefrom, are not anticipated by Damiani. Given that claims 11, 21, 24, and 27 each recite elements similar to those of claim 1, those claims, and the claims that depend therefrom, are not anticipated by Damiani for at least the same reasons.

B. Examiner's Second Response

In response to Appellant's argument that Damiani does not disclose, teach, or suggest "checking the cache entry for the path associated with the node", as recited in claim 1, the Examiner states:

> Appellant argues that Damiani does not teach paths, therefore the reference cannot anticipate this limitation either. This argument has already been addressed. Appellant also argues that the second cited passage of Damiani ("Performance and caching", lines 11-17) does not teach "checking the cache". The Examiner asserts that "checking the cache" is equivalent to the searching described in the cited passage. Caching is a very well-known technique at all levels of computing and the step of "checking the cache" is a necessary step in using a cache.

(August 1, 2007 Examiner's Answer, pg. 13).

Regardless of whether caching is a well-known technique, the issue is still whether Damiani discloses, teaches, or suggests "checking the cache entry for the path associated with the node", as recited in claim 1.

As discussed above, Damiani teaches storing authorizations, which the Examiner is construing as disclosing the "access control statement" recited in claim 1, in an XML Access Sheet (XAS), not a cache. In addition, the section in Damiani cited by the Examiner concerning path expressions only relates to how the "object" in the XML Access Sheet may be identified (*see* pgs. 64-65 of Damiani). Further, the section of Damiani cited by the Examiner concerning caching does not even mention paths or path expressions (*see* pgs. 68-69, section 5.3 of Damiani).

In Damiani, a cache is not checked for authorizations when an XML document is processed. Rather, the XAS associated with the XML document is checked. Specifically, Damiani states:

> Our processor takes as input the valid XML document requested by the user or computed by the query, together with an *XML Access Sheet* (XAS) listing the associated access authorizations at document level. The processor operation also involves the document's DTD and the associated XAS specifying DTD level authorizations.

(Pg. 67, section 5 of Damiani).

Damiani also states:

> (2) *Tree labeling*. The labeling step involves the propagation of the labeling of the DOM tree according to the authorizations listed in the XAS associated to the document and its DTD, both at the organization and at the site level.

(Pg. 67, section 5 of Damiani).

Accordingly, Damiani does not disclose, teach, or suggest "checking the cache entry for the path associated with the node", as recited in claim 1. Therefore, claim 1, and the claims that depend therefrom, are not anticipated by Damiani. Given that claims 11, 21, 24, and 27 each recite elements similar to those of claim 1, those claims, and the claims that depend therefrom, are not anticipated by Damiani for at least the same reasons.

C. Examiner's Third Response

In response to Appellant's argument that Damiani does not disclose, teach, or suggest "granting or denying access to the node based on the access control statement in the cache entry for the path associated with the node", as recited in claim 1, the Examiner states:

> Again, Appellant's argument comes down to whether or not Damiani teaches caching path information. See Examiner's comments above.

(August 1, 2007 Examiner's Answer, pg. 13).

Appellant does not dispute that one of the key issues is whether authorization and path information are cached in Damiani. Appellant, however, does dispute the Examiner's assertion that authorization and path information are cached in Damiani. Specifically, as discussed above, Damiani clearly states and shows that authorization and path information are stored in an XML Access Sheet (XAS), not in a cache.

Accordingly, Damiani does not disclose, teach, or suggest "granting or denying access to the node based on the access control statement in the cache entry for the path associated with the node", as recited in claim 1. Therefore, claim 1, and the claims that depend therefrom, are not anticipated by Damiani. Given that claims 11, 21, 24, and 27 each recite elements similar to those of claim 1, those claims, and the claims that depend therefrom, are not anticipated by Damiani for at least the same reasons.

Claim 21 recites:

> 21. A method for performing path-level access control evaluation for a structured document, wherein the structured document comprises a plurality of nodes and each of the plurality of nodes is described by a path, the method comprising the steps of:
>
> (a) storing an access control statement in a cache entry for a path associated with a node of the plurality of nodes, wherein the access control statement is one of a grant statement, a deny statement, an unknown statement, and a data-dependent statement;
>
> (b) receiving a query, wherein the query comprises a request to access the node;
>
> (c) checking the cache entry for the path associated with the node;
>
> (d) granting access to the node responsive to the access control statement being a grant statement;
>
> (e) denying access to the node responsive to the access control statement being a deny statement; and
>
> (f) evaluating a value expression for the path associated with the node to produce a result in response to the access control statement being an unknown statement or a data-dependent statement,
>
> wherein the value expression is an executable statement based on an access control policy affecting the path and indicates who has access to the node.

D. <u>Examiner's Fourth Response</u>

In response to Appellant's argument that Damiani does not disclose, teach, or suggest "evaluating a value expression for the path associated with the node to produce a result in response to the access control statement being an unknown statement or a data-dependent statement, wherein the value expression is an executable statement based on an access control policy affecting the path and indicates who has access to the node", as recited in claim 21, the Examiner states:

> The claim language reciting "an executable statement" is not granted much weight because all statements on a computer are executable. Less broadly, the relevant claim limitation is directed towards user authorization. Damiani discloses several granularities of authentication (see section 3.2, "Identifying authorization subjects"): "user identity" and "user-id".

(August 1, 2007 Examiner's Answer, pgs. 13-14).

If by stating that "the claim language 'an executable statement' is not granted much weight" the Examiner meant to read the term "an executable statement" recited in claim 21 out of the claim, then Appellant respectfully reminds the Examiner that longstanding caselaw holds that a claim CANNOT be construed so broadly such that terms recited in the claim are read out of the claim. Each term in a claim must be given meaning.

On the other hand, if by stating that "the claim language 'an executable statement' is not granted much weight" the Examiner meant that the authorizations in Damiani are also executable, then Appellant respectfully disagrees. In particular, as discussed above, the authorizations in Damiani are set forth in an XML Access Sheet (XAS). Those skilled in the art know that XML is a markup language, not a programming language.

Additionally, it is not inherent that the authorizations in Damiani are executable. Under M.P.E.P. § 2163:

> To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 U.S.P.Q.2d 1949, 1950-51 (Fed. Cir. 1999).

(M.P.E.P. § 2163.07, 8th ed., Sept. 2007 rev.). Persons of ordinary skill in the art readily understand that authorizations need not be executable statements since an authorization can simply be, for instance, a listing of users that have access to a particular document.

Accordingly, Damiani does not disclose, teach, or suggest "evaluating a value expression for the path associated with the node to produce a result in response to the access control statement being an unknown statement or a data-dependent statement, wherein the value expression is an executable statement based on an access control policy affecting the path and indicates who has access to the node", as recited in claim 21. Therefore, claim 21, and the claims that depend therefrom, are further not anticipated by Damiani. Given that claims 24 recite elements similar to those of claim 21, claim 24 is further not anticipated by Damiani for at least the same reasons.

CONCLUSION

On the basis of the above remarks, and the remarks made in the Appeal Brief, Appellant respectfully submits that the final rejection should be reversed.

Respectfully submitted,
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Dated: December 20, 2007

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VIII. APPENDIX OF CLAIMS

A listing of the claims involved on appeal is contained in the Appeal Brief.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None